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B8
and
so

a communication member between the sensor and monochromator to transfer the sensed near infrared radiation to the monochromator; and

a processor operatively connected to the monochromator, said processor being capable of identifying and determining the amount of constituents in the substance based on the detected and quantified one or more isolated narrow portions of the near infrared spectrum;

wherein said housing is movable relative to the substance.

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Canceled)

11. (Canceled)

12. (Canceled)

13. (Canceled)

[14. (Canceled)]

[15. (Canceled)]

[16. (Canceled)]

[17. (Canceled)]

Cmt.
[18. (Canceled)]

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[19. (Canceled)]

[20. (Canceled)]

21. (Amended) A method of analyzing a substance, said method comprising the steps of:

irradiating the substance with near infrared light;

with a sensor, sensing near infrared light, which reflects off or passes through the substance;

isolating the sensed radiation into one or more narrow portions of the spectrum, said step of isolating being selected from the group consisting of stationary interferometry, stationary Hadamard mask processes, use of an acoustic-optic tunable filter (AOTF), and use of an electro-optic modulator;

analyzing one or more of the isolated narrow portions; and

determining the identity and amount of constituents in the substance.

[22. (Canceled)]

[23. (Canceled)]

[24. (Canceled)]

25. (Canceled)

26. (Canceled)

27. (Canceled)

28. (Canceled)

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33. (Amended) A method of analyzing constituents of a substance in real time in a non-laboratory setting subject to diverse and changing environmental conditions, said method comprising the steps of:

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irradiating the substance with near infrared light;
with a sensor, sensing near infrared light that reflects off or passes through the substance while moving the sensor relative to the substance;
isolating the sensed radiation into one or more narrow portions of the spectrum;
in real time, analyzing one or more of the isolated narrow portions; and
determining the identity and amount of one or more constituents in the substance.

35. (Canceled)

36. (Canceled)

37. (Canceled)

38. (Canceled)

*encl
C5*
39. (Twice Amended) A system for measuring constituents of a substance in real time in a non-laboratory setting subject to diverse and changing environmental conditions, said system comprising:

a light source capable of producing near infrared radiation in a controllable direction to a substance location;

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a sensor oriented towards the substance location and capable of sensing near infrared radiation reflected from or passing through a substance at a substance location;

a sensor oriented towards the substance location, said sensor being capable of sensing near infrared radiation reflected from or passing through said substance at the substance location;

a monochromator having no moving optical components, said monochromator being selected from the group consisting of a stationary interferometer, a stationary Hadamard mask, an acoustic-optic tunable filter (AOTF), and an electro-optic modulator, said monochromator being capable of isolating narrow portions of the near infrared spectrum and having a detector positioned to detect and quantify one or more isolated narrow portions of the near infrared spectrum created by the monochromator;

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a communication member between the sensor and the monochromator to transfer the sensed near infrared radiation to the monochromator; and

a processor operatively connected to the monochromator, said processor being capable of identifying and determining the amount of constituents in the product based on the detected and quantified one or more isolated narrow portions of the infrared spectrum.

REMARKS

Applicant thanks the Examiner for the thoughtful comments in the Office Action of October 19, 2001. To further prosecution of the above-referenced application, the claims have been amended and the following remarks are submitted. Further, informalities in the Specification have been corrected and the Applicant respectfully requests reconsideration in view of the amendments and remarks.

For information purposes, Applicant is enclosing a copy of the Assignment of the above-referenced application and the Recordation Form Cover Sheet for same, both of which were filed on November 19, 2001. This Assignment indicates that Textron Systems Corporation is the new legal owner of the above-referenced application and parent patents. Consequently, Textron Systems Corporation now has the authority to prosecute the above-referenced application.